

REMARKS

Applicant is in receipt of the Office Action mailed January 24, 2005.

Claim status is:

Claims 1-30 were pending in the application prior to entry of the present amendment.

Claims 1, 11, 15-17, 20, and 23 are herein amended.

Claims 2, 19, 25, and 27-30 have been canceled.

New claims 31-41 have been added.

Claims 1, 3-18, 20-24, 26, and 31-41 are now pending.

Claim Objections

Claim 3 (dependent on claim 1) is rejected under 35 U.S.C. 112 as being indefinite, because there is insufficient antecedent basis for the term “the WTA output bit”. Claim 1 has been amended to include the term “WTA output bit” and therefore now provides sufficient antecedent basis.

Claim 27 is also rejected under 35 U.S.C. 112 as being indefinite, because of the terminology “plurality of samples in response to said graphics data” since it is unknown what the plurality of samples are...”. Claim 27 has been canceled.

Claims 1-30 are rejected under 35 U.S.C. 112 as being indefinite. The Examiner states in the current Office Action that “there is no such thing as a winner-take-all bit” and that “The term is indefinite because the specification does not clearly define the term.”

Applicant traverses the rejection of claims 1-30 under Section 112, because Applicant believes there is sufficient definition of the term “winner-take-all bit” in the specification. The term is well defined by the specification in the following paragraphs starting on page 65, line 20:

"In one embodiment, adder tree 2702 may be composed of adder cells as suggested by Figure 33A and/or Figure 33B. Each adder cell in layers after the top addition level 2710 may receive the value X_{out} , the corresponding data valid signal DV_{out} and the corresponding winner-take-all signal WTA_{out} from two adder cells of the previous level (through intervening buffer registers). The top addition level may receive a set of input data words. Each input data word comprises a numeric operand, a data valid bit and a winner-take-all bit. The data valid bit may indicate the validity of the corresponding numeric operand for inclusion in a summation. The winner-take-all bit may indicate whether the corresponding numeric operand corresponds to the winner-take-all sample in an unfiltered pixel computation. It is assumed that at most one of the input data words have a winner-take-all bit set (i.e. equal to one). Thus, this embodiment of adder tree 2702 may generate an output from the bottom addition level 2712 which equals either (a) a summation of selected ones of the input numeric operands when none of the winner-take-all bits presented at the top layer are set, or (b) the unique input numeric operand whose winner-take-all bit is set. In case (a), the summation includes all those numeric operands whose data valid bits are set (i.e. equal to one).

Any given adder cell and the adder cells from previous layers which feed the given adder cell comprise a subtree. The numeric operands presented to the subtree at the top layer are referred to as the subtree operands. The output X_{out} from the given adder cell equals either (i) a summation of the valid subtree operands (i.e. those subtree operands which have data valid signals equal to one) when the winner-take-all bits of all the subtree operands are equal to zero, or (ii) the unique subtree operand whose winner-take-all bit is set. The data valid output signal DV_{out} generated by the given adder cell equals the logical OR of the data valid bits of all the subtree operands. Similarly, the winner-take-all output signal WTA_{out} generated by the given adder equals the logical OR of the winner-take-all bits of all the subtree operands."

Allowable Subject Matter

The Examiner states in the Office Action that claims 2-8, 11-14, 18-22, and 24-26 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112 set forth in the current Office Action and rewritten to include all of the limitations of the base claim and any intervening claims. The section 112 rejections have been traversed for at least the reasons given above under the "Claim Objections" heading.

In order to expedite the claims toward allowance, independent claims 1, 15, and 23 have been amended as follows:

Claim 1 has been amended to include the limitations of claim 2.

Claim 15 has been amended to include the limitations of claim 19.

Claim 23 has been amended to include the limitations of claim 25.

Claims 2, 19, and 25 have been canceled.

In addition, new independent claim 31 has been written to include the limitations of the original claim 1 and claim 4, and new independent claim 39 has been written to include the limitations of the original claim 15 and claim 18.

Art Rejections

Claims 1, 10, and 23 were rejected under 35 U.S.C. Section 103(a) as being unpatentable over Spiegel et al. (USPN 5,615,282) in view of Tsay (USPN 5,673,215).

Claim 9 was rejected under 35 U.S.C. Section 103(a) as being unpatentable over Spiegel et al. (USPN 5,615,282) in view of Tsay (USPN 5,673,215) as applied to claim 1, and further in view of Harris et al. (USPN 4,021,654).

Claims 15-17 and 27-30 were rejected under 35 U.S.C. Section 103(a) as being unpatentable over Spiegel et al. (USPN 5,615,282)

Independent claim 1 has been amended to include the limitations of claim 2. The Examiner states that claim 2 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112 as set forth in the current Office Action and rewritten to include all of the limitations of the base claim and any intervening claims. The section 112 rejections have been traversed for at least the reasons given above under the "Claim Objections" heading. Therefore, Applicant submits that claim 1 and its dependent claims are non-obvious and patentably distinguished over Spiegel and Tsay.

Independent claim 15 has been amended to include the limitations of claim 19. The Examiner states that claim 19 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112 as set forth in the current Office Action and rewritten to include all of the limitations of the base claim and any intervening claims. The section 112 rejections have been traversed for at least the reasons given above under the "Claim

“Claim Objections” heading. Therefore, Applicant submits that claim 15 and its dependent claims are non-obvious and patentably distinguished over Spiegel.

Independent claim 23 has been amended to include the limitations of claim 25. The Examiner states that claim 25 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112 as set forth in the current Office Action and rewritten to include all of the limitations of the base claim and any intervening claims. The section 112 rejections have been traversed for at least the reasons given above under the “Claim Objections” heading. Therefore, Applicant submits that claim 23 and its dependent claims are non-obvious and patentably distinguished over Spiegel and Tsay.

The Examiner states that claims 11-13, and 20-22 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112 as set forth in the current Office Action. The section 112 rejections have been traversed for at least the reasons given above under the “Claim Objections” heading. Therefore, Applicant submits that claims 11-13, and 20-22 are allowable.

New independent claim 31 includes the limitations of the original claim 1 and claim 4. The Examiner states that claim 4 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112 as set forth in the current Office Action and rewritten to include all of the limitations of the base claim and any intervening claims. The section 112 rejections have been traversed for at least the reasons given above under the “Claim Objections” heading. Therefore, Applicant submits that claim 31 and its dependent claims are allowable.

New independent claim 39 includes the limitations of the original claim 15 and claim 18. The Examiner states that claim 18 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112 as set forth in the current Office Action and rewritten to include all of the limitations of the base claim and any intervening claims. The section 112 rejections have been traversed for at least the reasons given above under the “Claim Objections” heading. Therefore, Applicant submits that claim 39 and its dependent claims are allowable.

CONCLUSION

Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5181/56601.

Also enclosed herewith are the following items:

- Return Receipt Postcard
- Request for Approval of Drawing Changes
- Notice of Change of Address
- Check in the amount of \$ _____ for fees (_____).
- Other:

Respectfully submitted,



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